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ABSTRACT

This study used the Delphi technique to determine degrees of consensus on the future of teacher education. The panel of experts was comprised of 40 chief administrative officers or their representatives in the English-language teacher education institutions in Canada. In Part I of the study, each of the 40 panelists was provided with 20 statements about the future of education and was invited to formulate additional statements. In edited form these statements became the questionnaire of Part II of the study. In part II, panelists were asked to choose the most probable date of occurrence from given time intervals. Part III provided data on how the group as a whole had reacted to some of the statements in Part II. Panelists were asked to reconsider these particular items in light of this information. In Part IV panelists were asked to state the most probable date of occurrence in their own institution. Significant changes between degree of consensus in Parts II and III were noted in several cases. It was also found that panelists tended to choose a later date of occurrence for their own institutions than for teacher education in general. (The report contains the complete text of the questionnaires used in all four parts, along with an analysis of results at each stage.) (RT)

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THE FUTURE OF TEACHER EDUCATION

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THE FUTURE OF TEACHER EDUCATION

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For I dipt into the future,
Far as human eye could see,
Saw the Vision of the world,
And all the wonder that would be;

Futurology

In April, 1970, an International Conference on Future Research was held at Kyoto, Japan. This well-attended conference explored almost every aspect of futurology. The scope was broad. A quick glance at the titles of the papers presented indicates that the technological future based on developments in physics, chemistry, biology, genetics, and other sciences is almost sure to affect the social future. It is into the context of technological and social change that education in the future will be set. While it is necessary to recognize this context, the vast and rapidly growing literature on the future in the areas which constitute that context is too extensive to be reviewed here.

Some of the organizations and institutions which are attempting to examine the future, treat education as only one part of their study. Of the eight divisions of the conference mentioned above, one was devoted to the future of education. Plan Europe 2000 takes a similar approach when it states:

> Plan Europe 2000 groups together four research programmes whose common objective is to endeavour, by systematic thinking, to conceive of society as it will be in the 21st century and the type of man capable of regulating it. The projects relate to education, the development of industrialization, urban development, and rural development.
>
> (Europe 2000, Vol. 2, 1970)

On this continent, the Institute for the Future, in concentrating on long-range forecasting of technological and societal events, includes education among the latter. In the table of contents one of its publications lists the following items under Future Developments:

1. Urbanization
2. The Family
3. Leisure and the Economy
4. Education
5. Food and population
6. International Relations
7. Conflict in Society: Law Enforcement
8. National Poiitical Structure
9. Values
10. Impact of Technology on Government and Society

(de Brigard and Helmer, 1970)

There are two institutions in North America whose chief function is to study the future of education. One is the Educational Policy Researcn Center at Syracuse and the other is the Educational Policy Research Center at the Stanford Research Institute. The Syracuse Center has stated that:

> Planning, whether in or outside of the educational system, is an attempt to gain some control over the future, to reduce the intrinsic uncertainty of the future to manageable proportions.
>
> (Ziegler, 1969)

The Stanford Center has defined its function as follows:

> The task of the Educational Policy Research Center is to illuminate the nature of basic issues, conceptualize possible alternative futures, and analyze the means available for the achievement of policy goals and the consequences of alternate choices.
>
> (EPRC, undated)

Each of these Centers has a list of publications directly devoted to the future of education.

The sketchy outline of futurology just given concludes with a reference to a recent review of the literature, completed in the spring of 1970. (Dyck et al 1970). Some 34 of the 331 multilithed pages were devoted to the future of education. The review was the starting point for the statements on "education in the future" used in the present study.

Review of Previous Studies

Although the future of education has been studied as one part of futurology, and although two institutions in the United States focus on the study of the future of education, the authors know of no study devoted specifically to the future of teacher education.

The Elementary Teacher Education Models sponsored by the United States Office of Education have been summarized and reviewed by Burdin (1969), Clarke (1969), Le Baron (1969), Klatt & Le Baron (1969), and a number of authors in the Journal of Research and Development in Education, a Bulletin of the University of Georgia, Vol. 2, No. 3, (Spring 1969). At least one of these models (Sowards 1968) attempted to look ten years ahead in teacher education. Its rationale included three phases; predictions for society by 1978 (e.g. the trend towards urbanization will be accelerated), predictions for education by 1978 (e.g. society will make increased demands upon schools and colleges to fashion programs to meet the needs of all of its people), and inferences about elementary school teaching by 1978 (e.g. only broadly educated persons of high ability will be able to make the difficult decisions required

of elementary school teachers). This sequence formed the basis for a task analysis of teaching in 1978 and of the preparation required. To a greater or lesser extent each of the models adopted the sequence illustrated: the anticipated future state of the world, the nation, education, teaching, the teaching profession, and therefore teacher education. Models varied in what has been called "extent of lead" (Clarke 1971), that is, the remoteness of the anticipated future.

The Phase II of the USOE Elementary Teacher Education Models elicited some detailed reviews of studies of the future and of proposals to continue and extend such studies. Thus, Michigan State University (1970) devotes a 37 page chapter entitled "Feasibility Study: Behavioral Science Teacher Education Program" to Systematic Analysis of Future Society. Items 3 and 4 in the "Statements About Education in the Future" used in the present study derive from this source which continued each of the quoted statements with "Impact on school personnel" and "Impact on teacher education programs". It is virtually impossible to present examples of statements dealing with teacher education in the future without also giving lengthy contexts.

The Syracuse University Phase II proposal (Weber 1969) devotes a 10 page chapter entitled "Scenario" to a hypothetical exchange of correspondence between the program director and a student who in 1977 is writing a history of the project. This chapter constitutes a "futures history" of the project, and incidentally a short-term view of the future of teacher education.

The Oregon College of Education Phase II proposal (Schalock 1970, Vol. II) devotes 44 pages of appendix material to societal and educational projections, with relevant analysis and implications. Statement 17 of the "Statements About Education in the Future" used in the present study is quoted from this source. The societal and educational changes are used to sketch in brief some changes in teacher education.

Teacher education for the future is the topic of a book in the seven volume series of the eight-state project "Designing Education for the Future". Volume 7 of the series (Morphet and Jesser 1969) is on teacher education. Each of its 13 chapters is written by an expert on one aspect of teacher preparation. The flavor of the volume is indicated by the following quotation (p. 17):

> Training in self-consciousness and self-awareness; in the capacity to absorb criticism without fear of loss of esteem or worthiness; in a sensitivity to how they are being perceived by their students and a caring how they are perceived -- these are some of the new facets of teacher preparation that are required.

Two other sources of statements about teacher education in the future might be mentioned in passing. In May 1970 Coutts presented an unpublished paper on Preparing the Teachers We Need. Also in 1970 Clarke prepared a position paper for the Commission on Educational Planning of the Province of Alberta on teacher education in the year 2000.

The picture of teacher education in the future which emerges from the studies reviewed is fragmentary and incomplete. In many

instances it derives from the vision of one person. The present study sought a consensus of expert opinion on the topic.

The Delphi Technique

Weaver (1971) presents a review of the Delphi forecasting method and concludes that it holds considerable promise as a pedagogical tool to be used to get educators to think in more complex ways about the future. Cyphert and Grant (1970 and 1971) describe its use in deriving statements about the goals of teacher education for a particular institution.

The basic features of the Delphi technique are (1) anonymity for panelists during the forecasting, (2) controlled feedback to the panelists of opinions generated in the several rounds of mailed interaction, and (3) statistically descriptive group responses. The technique originated in 1953 as an alternative to the traditional round-table discussion by experts. Advantages claimed for this approach are the elimination of:

> ---committee activity altogether, thus further reducing the influence of certain psychological factors, such as specious persuasion, the unwillingness to abandon publicly expressed opinions, and the bandwagon effect of majority opinion.
>
> (Helmer and Rescher, 1959)

Within the broad framework described, the procedure generally consists of selecting a panel of experts, asking each to make statements about the future in his area of expertise, and asking the panelists to react to the statements about the future so derived. The reactions may be in terms of probability of occurrence, time of occurrence, desirability, or the like.

It is not uncommon to provide the panel of experts with some thought-provoking information at the time they are first asked to make statements about the future. For example, "The first questionnaire presented the respondents with a brief description of current trends in each of twelve areas---" (de Brigard and Helmer, 1970), or "It was deemed prudent to assist panelists in their quest for forecasts with an outline of the topic---". (Dyck 1970)

In the present study the Delphi technique was used. The panel of experts was comprised of the chief administrative officers (Presidents, Deans, Directors, Principals, etc., or their representatives) in the English-language teacher education institutions in Canada. In institutions enrolling over 1000 students the chief administrative officer was asked to name a panelist for each additional 1000 students or fraction thereof. Table I presents data about the panelists.

Table I

Panelists in Study on Future of Teacher Education

	Contacted	Participated
Universities	30	20
Teachers' Colleges	11	7
Number of Institutions	41	27
Panelists in Universities	43	32
Panelists in Colleges	12	8
Number of Panelists	55	40

Of the 32 panelists from Universities, 15 were deans or equivalent, 2 were associate deans, 5 were department heads, and 10 were

professors. Of the panelists from teachers' colleges, seven were presidents or equivalent and one was a staff member.

In Part I of the study each of the 40 panelists who consented to participate was provided with 20 statements about the future of education and was invited to formulate statements about the future of teacher education. In edited form these statements became the questionnaire of Part II of the study. Part II panelists were asked to choose the most probable date of occurrence from given time intervals. Part III provided data on how the group as a whole had reacted to some of the statements in Part II. Panelists were asked to reconsider these particular items in light of this information. In Part IV panelists were asked to state the most probable date of occurrence in their own institution. It should be noted that the original 40 panelists who completed Part I participated also in Parts II and III. Thirty-nine panelists completed Part IV.

Statements About the Future of Education

Futurologists point out that the social consequences of technological change present complexities and difficulties of considerable magnitude. It follows that to derive concepts about the future of education is a difficult matter. The future of teacher education, inextricably bound up as it is with the future of education, is several stages removed from technological change. While it is recognized that not all changes in teacher education have origins in changes in education, many no doubt do. For this reason it was decided to

provide in Part I a set of statements about the future of education. Dyck's survey (previously mentioned) provided 25 statements. An additional survey of recent literature brought to 58 the number of statements identified. Many of them overlapped. After eliminating overlap, twenty statements, with references cited, were selected for use. (Appendix I.) No attempt was made to eradicate contradictions or inconsistencies. Only overlap was eliminated.

One reason for supplying participants with a selection of statements on education was that these might serve as a model of the type of statement about the future of teacher education which was being sought.

The covering letter which requested statements about the future of teacher education had this to say about the statements on the future of education:

> Technological change spurs and interacts with social change. As society changes, education will change. Teacher education interacts with education both to initiate change and to reflect change.
>
> A number of statements about education in the future are enclosed for the purpose of sparking your imagination. It is not intended that you accept the picture of education in the future as presented in these statements. In fact the statements are drawn from many sources and may include contradictions. Despite these difficulties, however, it is felt that the statements may be stimulating. You may keep them.

Panelists' Statements About the Future of Teacher Education

The statements which were elicited from the panelists were derived in the context previously described. The instructions were as follows:

> Based on your own view of what education will be like about the year 2000, you are asked to list statements about teacher education in the future. You are asked to make your statements in the future tense, that is, as something that "will be" and as precise as possible so that your meaning will be quite clear. Please concentrate on a few statements which you deem most important rather than attempting the many statements which would be required to provide a complete description of teacher education in the future.

Nearly all panelists returned statements in the requested format, i.e., they used "will be" or "will". Most of the 183 statements received were reasonably terse, in the order of 20 to 50 words. Some were uncontestable, e.g., "Teacher education will continue to be concerned with the art of communication". Others were statements of trend, e.g., "There will be a greater emphasis on selection". Many expressed the same ideas in different forms, e.g.:

1. Teacher education will, in association with the Teachers' Federations and School Boards, take responsibility for the supervision and continuing education of teachers in their first years of teaching in what will be called an internship experience.

2. The teaching profession will become much more extensively involved in selection of candidates for admission to programs, supervision of interns, and assessment of the effectiveness of beginning teachers, than it now is.

The editing process sought to reword trend statements into statements descriptive of a state, to eliminate overlap, to omit statements with which it was thought everyone would agree, to sharpen the wording to increase clarity and avoid ambiguity, and to break up statements which included several ideas either into separate

statements or into a common stem with multiple branches. One of the most difficult decisions was whether to include statements which while essentially statements about the future of education, had appended to them the requirement that teachers would have to be prepared to meet the changes mentioned. An example follows:

> Teacher education will prepare teachers who can help young people develop and hold fast to a set of beliefs which are not subject to change - an unchanging and unchangeable set of values which give direction and meaning to life.

Where it appeared that the emphasis in the statement was on the future of education, it was not included.

The edited statements used in Parts II and IV contained 38 statements organized into 28 items, some items having a stem followed by a number of completions.

Panelists' Description of the Future of Teacher Education

The 38 statements, with number and per cent tally of probable date of occurrence are listed in Appendix III in descending order of consensus. A selection of panelists' comments accompanies each statement. In the following paragraphs the consensus on 28 statements from Part II and 10 statements from Part III is presented with an estimate of most probable date of occurrence. This constitutes a picture of the future of teacher education as seen by the panelists.

Panelists were asked to mark the most likely date "when you think the statement will be descriptive of teacher education" from these probable dates of occurrence: 1971-75, 1975-85, 1985-2000, after 2000, never. Even though the panelists were deemed to be experts in teacher education, the precision of forecast did not appear

to warrant a sophisticated mathematical treatment of the results. For the purposes of this study, the number or per cent of panelists who marked adjacent time periods and a rounded estimate of the most probable date (by five years intervals) was used to denote the degree of consensus. For example, for the statement that "Teacher education will be the responsibility of universities or university related institutions by 1975", 78 per cent of the panelists judged the most probable date of occurrence as 1971-75 and 20 per cent judged it as 1975-85. Thus 98 per cent of the panelists judged the most probable date in adjacent columns. For this item, the most likely date of occurrence by five year intervals was determined to be 1975. The first paragraph below includes statements with 90 per cent or higher agreement. The second paragraph includes statements with over 80 per cent agreement. For example, in the first item of the second paragraph 28 per cent of the panelists chose the most probable date as 1971-75 and 60 per cent chose 1975-85. The most likely date of occurrence was determined to be 1980. The succeeding paragraphs present the remaining statements which describe the future of teacher education, with over 70 per cent, over 60 per cent, over 50 per cent, and over 40 per cent agreement respectively. It is obvious that these latter paragraphs represent considerable disagreement or lack of consensus. It should be emphasized that the panelists originated the 38 statements about the future of teacher education listed below. The authors of the study merely edited the statements into their present form.

VERY HIGH DEGREE OF CONSENSUS

(90% or more of panelist ratings in adjacent time categories)

* By 1975 teacher education will be the responsibility of universities or university related institutions.
* By 1975 candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit satisfactory standards of excellence in (1) human relations: ability to relate to young people and to work with both young people and old by 1980, and in (2) English usage: appropriate oral and written languages.
* The common learnings required of all teachers will include by 1975 preparation in the use of the latest educational technology and media.

HIGH DEGREE OF CONSENSUS

(80-89% of panelist ratings in adjacent time categories)

* Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit by 1980 a satisfactory standard of excellence in mental health: warmth, understanding, poise, absence of hostility, etc.
* By 1975 teacher education will emphasize the process of learning (observing, classifying, inferring, enquiring, reasoning, remembering) as contrasted with the product (information, knowledge, concepts, generalizations).
* In the period 1971-75 teacher education will be just about the same as it was in 1969-70, i.e., there will be change but it will be gradual.

* By 1985 although there will be a common core of learnings for all, each candidate's program will be individually tailored.
* Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required by 1980 to exhibit a satisfactory standard of excellence in speech: articulation, enunciation, modulation, etc.
* Never, (but certainly not before the year 2000) will institutions devoted to the preparation of teachers disappear.
* By 1985 teacher education will be producing teachers who are highly specialized both in individualization and in group processes.
* Teacher education will be involved by 1990 with constant or periodic re-evaluation of teachers who will have to requalify to retain certification.
* Lectures as we now know them will by 1985 be almost completely displaced by combinations of self-directed study, tutorials, the use of new technology such as computer dialed instruction, simulation, T.V., micro teaching and the like.

CONSIDERABLE CONSENSUS

(70-79% of panelist ratings in adjacent time categories)

* The university professor of education will never (but certainly not before the year 2000) be a research scholar only.
* Teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of function (curriculum materials developer, diagnostician of learning difficulties, counselor) by 1985.

* The common core of learning required of all teachers will include by 1980 preparation in working as a member and as a leader of a group or team which may be a mixture of superordinates and subordinates or persons all at one professional level.
* By 1980 teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of level (nursery to university).
* Candidates for teaching will never (or only after the year 2000) have to choose between two major branches of teacher education: one based on educational technology (including curriculum development) and the other based on psychology (diagnosis and prescription of learning).
* By 1985 teacher education will continue throughout the teachers' career with frequent use being made of sabbatical leave arrangements of one or two semesters to be spent in university.
* By 1980 teachers and teachers' organizations will share control of teacher education about equally with teacher education institutions in determining the overall goals of teacher education.
* The majority of professors of education will by 1985 spend as much time in the field with children and with teachers as they do in the university.
* Whereas now nearly all teachers are prepared for teaching at the Grades 1 - 12 (or 13) level, by 1985 up to half will be prepared for teaching at earlier or later levels such as nursery, kindergarten, adult, and continuing education.

* By 1985 teacher education will be centered around an extended internship.

SOME CONSENSUS

(60-69% of panelist ratings in adjacent time categories)

* Teacher education will never (or only after the year 2000) provide limited commonality of experience and no established minimum or maximum time requirement.
* By 1980 teacher education will be involved in making education an effective force for reducing social and other inequalities.
* By 1980 teachers and teacher's organizations will share control of teacher education about equally with teacher education institutions in recruitment and selection of candidates.
* The common core of learning required of all teachers will include by 1990 an emphasis on ethics, morals, attitude development and character formation.
* By 1980 certification (or its equivalent) will be specific to the area of specialization.
* By 1980 there will be disillusionment with innovation and change in teacher education.
* General education and subject matter specialization will never (and certainly not before the year 2000) be relegated to the background in favor of psychological and sociological studies, studies of cultural values , guidance techniques, and the like.

* Teachers and teachers' organizations will share control of teacher education about equally with teacher education institutions (1) by 1990 in determining the curriculum and procedures used in teacher education institutions and (2) by 1980 in determining which candidates have successfully completed the program and warrant certification.
* By 1990 the mass approach to the preparation of teachers will be supplemented by a highly individualized and very expensive sequence of field experiences extending from orientation to teaching to post-program assistance and using extensive human and technetronic resources.

LITTLE CONSENSUS

(50-59% of panelist ratings in adjacent time categories)

* By 1980 teachers will be prepared more intensively as subject specialists.
* By 1990 teacher education will be based upon an individual learning contract established directly between the neophyte and a representative board of scholars, professionals, and government representatives, the contract content to be determined by the gap which exists between the student's present capabilities and the minimal standards required for the professional work in which he seeks to specialize.
* By 1990 teacher education programs will average six years of university level preparation before first certification.
* By 1990 teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of

staff differentiation (teacher, supervisor, administrator).

NO CONSENSUS

(less than 50% of panelist ratings in adjacent time categories)

* By 1980 the traditional boundaries between discipline methodology will disappear, i.e., general methods related to the cognitive disciplines will displace specialized methods in specific subjects.

A reader reaction may be that these statements which the panelists deem will be descriptive of teacher education by the dates given offer little that is new or startling. A response to this reaction is that change and improvement in teacher education may be more likely to occur by dissemination, diffusion, and adoption of presently known and used features of teacher education rather than by the invention or discovery of entirely new features. A second response is that if teacher education everywhere had the features described, it would differ considerably from teacher education as it is in fact in many institutions.

It is of considerable interest to compare the statements on which there is a high degree of consensus with those where there is little. It is also of considerable interest to note that a number of statements originated by their colleagues were rejected (marked as never, or only after 2000) by the majority of the panelists. The panelists in this study had firm beliefs about the future of teacher education. These beliefs were not greatly affected by convergence techniques.

Convergence

The essence of the Delphi technique as originally conceived was to secure agreement or consensus of experts without the distracting pressures generated from face to face or group contact. In the present study ten statements were resubmitted to the panelists in order to secure convergence. With each statement the per cent response from Part II was provided. The results are presented in Appendix IV.

In the case of one statement (#6), the comments showed that there were two distinct interpretations. Hence, an additional explanation was provided, and consensus (measured by the response in two adjacent columns) increased from 51 to 81 per cent. For three other items (#25, 9(d), and 27) the change was an increase in consensus of 17, 15, and 10 per cent respectively. For two items (9(c) and 11) there was no change, and for one item (10(b)) there was a decrease in consensus as measured.

These results hide a change in distribution of response which frequently occurred. However, the change in response was of considerable magnitude on only four of the ten items, while on another four items there was little change.

Panelists' Description of the Future of Teacher Education in Their Own Institutions

Item I of Part II was omitted from Part IV of the study. The remaining 37 items, with number and per cent tally of probable date of occurrence in the panelists' own institutions, together with their

comments, are listed in descending order of consensus in Appendix V. Panelists were asked to mark the most likely date when each statement would be descriptive of teacher education in their own institutions. The time intervals and the method of scoring which applied in Parts II and III were again used for Part IV. The authors were interested to determine the relationship between the views of the panelists when responding with respect to teacher education in general and when responding with respect to possible implementation in their own institutions.

VERY HIGH DEGREE OF CONSENSUS

(90% or more of panelist ratings in adjacent time categories)

* By 1975 the common core learning required of all teachers will include preparation in the use of the latest educational technology and media.(98%)
* By 1975 candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in English usage: appropriate oral and written language. (95%)
* By 1980 teacher education will emphasize the process of learning (observing, classifying, inferring, enquiring, reasoning, remembering) as contrasted with the product (information, knowledge, concepts, generalizations.) (95%)
* By 1985 teacher education will be producing teachers who are highly specialized both in individualization and in group processes. (92%)

* By 1975 candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in speech: articulation, enunciation, modulation, etc. (92%).
* Never (or after the year 2000) will there be any institution devoted to preparing teachers, i.e., teachers will be prepared but not in institutions. (92%)
* By 1980 the common core learning required of all teachers will include preparation in working as a member and a leader of a group or team which may be a mixture of superordinates and subordinates, or persons all at one professional level. (90%)

HIGH DEGREE OF CONSENSUS

(80-89% of panelist ratings in adjacent time categories)

* By 1980 candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in human relations: ability to relate to young people and to work with others both young and old. (88%)
* By 1980 candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in mental health: warmth, understanding, poise, absence of hostility, etc. (87%)
* By 1980, although there will be a common core of learnings for all, each candidate's program will be individually tailored. (85%)

* By 1980 teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of function (curriculum materials developer, diagnostician of learning difficulties, counsellor.) (82%)
* Never (or after the year 2000) will teacher education provide little if any commonalities of experience and no established minimum or maximum time requirement. (81%)

CONSIDERABLE CONSENSUS

(70-79% of panelist ratings in adjacent time categories)

* By 1985 teachers and teachers' organizations will share control of teacher education about equally with our teacher education institution in recruitment and selection of candidates. (79%)
* By 1980 teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of level (nursery to university.) (79%)
* By 1990, whereas now nearly all teachers are prepared for teaching at the Grades 1-12 (or 13) level, up to half will be prepared for teaching at earlier or later levels such as nursery, kindergarten, adult, and continuing education.) (77%)
* Never (or after the year 2000) the university professor of education will remain only as a research scholar. (76%)
* By 1990 teacher education will be involved with constant or periodic re-evaluation of teachers who will have to requalify to retain certification. (74%)

* By 1980 teachers and teachers' organizations will share control of teacher education about equally with our teacher education institution in determining the overall goals of teacher education. (72%)
* By 1985 teacher education will continue throughout the teacher's career, with frequent use being made of sabbatical leave for one or two semesters to be spent in our institution. (71%)
* By 1985 teacher education will be centred around an extended internship. (70%)
* By 1985 certification (or its equivalent) will be specific to the area of specialization.

SOME CONSENSUS

(60-69% of panelist ratings in adjacent time categories)

* By 1980 teachers will be prepared more intensively as subject specialists. (67%)
* Never (or after the year 2000) candidates for teaching will have to choose between two major branches of teacher education: one based on educational technology (including curriculum development) and the other based on psychology (diagnosis and prescription of learning). (66%)
*By 1985 the majority of instructors in our institution will spend as much time in the field with children and with teachers as they do in the institution. (66%)
* By 1985 the mass approach to the preparation of teachers will be

supplemented by a highly individualized and very expensive sequence of field experiences extending from orientation to teaching to post-program assistance, using extensive human and technetronic resources. (64%)

* Never (or after the year 2000) general education and subject matter specialization will be relegated to the background in favor of psychological and sociological studies, studies of cultural values, guidance techniques, and the like. (64%)
* By 1980 the common core required of all teachers will include a greal deal of attention to ethics, morals, attitude development and character formation. (62%)
* By 1985 lectures as we now know them will be almost completely displaced by combinations of self-directed study, tutorials, the use of new technology such as computer dialed instruction, simulation, T.V., micro-teaching, and the like. (61%)

LITTLE CONSENSUS

(50-59% of panelist ratings in adjacent time categories)

* By 1985 teachers and teachers' organizations will share control of teacher education about equally with our teacher education institution in determining the curriculum and procedures used in our teacher education institution. (59%)
* Never (or after the year 2000) teacher education programs will average six years of university level preparation before first certification. (57%)

* By 1985 teachers and teachers' organizations will share control of teacher education about equally with our teacher education institution in determining which candidates have successfully completed the program and warrant certification. (56%)
* Never (or after the year 2000) teacher education will be based upon an individual learning contract established directly between the neophyte and a representative board of scholars, professionals, and government representatives, the contract content to be determined by the gap which exists between the student's present capabilities and the minimal standards required for the professional work in which he seeks to specialize. (64%)
* By 1985 teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of staff differentiation (teacher, supervisor, administrator). (54%)
* By 1985 teacher education will be involved in making education an effective force in reducing social and other inequalities. (51%)
* By 1985 the traditional boundaries between discipline methodology will disappear, i.e., general methods related to the cognitive disciplines will displace specialized methods in specific subjects. (51%)

NO CONSENSUS

(less than 50% of panelist ratings in adjacent time categories)

* By 1980 there will be a disillusionment with innovation and change in teacher education. (49%)

* 48% of respondents indicated that in their judgment teacher education will by 1980 be just about the same as it was in 1969-70; another 48% indicated that change will occur never (or after the year 2000).

SOME COMPARISONS AND RELATIONSHIPS

The authors would be foolhardy to draw firm conclusions from the data presented. At the same time, they would be remiss in not making comparisons and showing relationships where these appear to be useful and to hold promise for the future of teacher education.

Using Spearman's Rank Correlation procedure, the authors found a correlation of .75 between the responses on Parts II and III on the one hand and Part IV on the other. Item 6 which dropped from 6th to 37th place was obviously interpreted quite differently by different respondents from Part II on. If item 6 were to be omitted the Spearman Rank Correlation between responses on Parts II and III on the one hand and those of Part IV on the other would have been .85.* A correlation of .85, or even of .75, with all the reservations one may hold concerning it, does indicate a certain consistency between what the respondents believe will happen in teacher education in the future and what they believe about the implications and applications in their own colleges and universities. While it is not possible to be completely sure that the respondents answered all items of Part IV on the

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*Sidney Siegel. Non-parametric Statistics for the Behavioral Sciences. McGraw-Hill Book Company, New York: 1956, pp. 202-213.

basis of what in their opinion will happen in their own institutions, there is plenty of evidence that they recognized differences between what they believe about the future of teacher education and the realities of operating in a particular institution. This is suggested in part by the fact that the rank correlation is not higher, in part by the way in which panelists answered specific items. While continuing to score item 26 consistently in the "Never" column, a much higher number and per cent of respondents so marked it in relation to their own institutions. A higher per cent marked item 17(a) in adjacent columns but indicated a slight delay in implementation from 1975 to 1980. In relating items 6 and 22 to their own institutions there was a large drop in the number marking the items in adjacent columns and a delay in the probable date of implementation. There was a slight drop in the per cent and a delay in time of implementation with respect to items 9d, 27, 25, 23, in that order; a slight drop in support but a consistent "Never" with respect to item 13. For items 21, [redacted], 10(c), 12, and 11 there was a slight rise in percentage support but a delay in timing; for items 9b and 3, a slight rise in percentage support without a change in timing. In some instances - [redacted] - the only change suggested related to the time of probable occurrence. These changes suggest a host of variations related to the future of teacher education programs in individual institutions varying in organization, function, and size. It was of interest to the authors that, in applying the statements to their own

institutions, the panelists in general tended to suggest later rather than earlier dates of occurrence.

CONCLUDING STATEMENTS

The authors, while aware of the many limitations of the present study, feel that there is merit in experimenting with the Delphi technique as an alternative to the round-table discussion. In spite of the fact that the respondents in the study are in a variety of teacher education institutions, there seems to be evidence that their professional opinions about the preparation of teachers are more alike than one would anticipate. It is obvious to the authors of this paper that the teacher educators and teacher education institutions included in this study are aware of the problems facing education, and hence teacher education, in the years ahead, and that much careful and creative thought is already being given to the planning and development of programs suited to the needs of the future.

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APPENDIX I

Delphi Investigation: Teacher Education in the Future

PART I

STATEMENTS

APPENDIX I

STATEMENTS ABOUT EDUCATION IN THE FUTURE

1. "In the three short decades between now and the turn of the next millenium, millions of psychologically normal people will experience an abrupt collision with the future. Affluent, educated citizens of the world's richest and most technically advanced nations, they will fall victim to tomorrow's most menacing malady: the disease of change. Unable to keep up with the supercharged pace of change, brought to the edge of breakdown by incessant demands to adapt to novelty, many will plunge into future shock. For them, the future will have arrived too soon."

   (Toffler, 1970, p. 94)

2. "One of the most pressing needs for the individual in the decades ahead will be for psychological mechanisms and strategies necessary to cope with rapid technological and social change.....In order to develop more effective psychological strategies for coping with rapid change, much greater demands will be made on all institutions, and particularly schools, to permit sound mental development. In fact, more education and training will be one set of strategies which will become increasingly important in coping with change."

   (Dyck, 1970, p. 23)

3. "Education may be reduced to indoctrination, prescribed skill development, induced satisfaction, and routinized searches for pleasure and comfort. Yet, it could become individualized, relevant, and enriched by the tools of technology and world-wide resources of people, places, and things. There could be lifelong growth in knowledge, insights, and competencies for all humans. There could be a satisfying mix of that which humanizes and that which facilitiates effective, competent citizenship."

   (Feasibility Study: B.S.T.E.P., 1970, p. 245)

4. "The actual number and percentage of the population under 30 years of age will increase. The values of the young will influence those over 30 significantly. Thus, the society will be a youthful one in terms of attitudes, objectives and practices. A generation gap of major portions will exist. The young in age or in attitude will predominate in all aspects of the society. Older members will periodically attempt repressive measure to stem societal changes which seem too radical, unfeasible, and so forth. Educational outcomes: decrease in content with a past orientation; increase in content with intrinsic values; methodology which stresses involvement of students in much activity; facilities which are pleasant and activity oriented, for day, night, year-round use."

   (Feasibility Study: B.S.T.E.P., 1970, p. 250)

5. "Students will have a major voice in policy decisions directly affecting them."

   (Congress on the Future of Education, Edmonton, December, 1970)

6. By the year 2005 the hours of the work day and the work week will be reduced. The annual vacation and the age of entry into the work force will increase, and the age of retirement will lower. "One major use of this leisure time will be for education (retraining, continuing education, outdoor education) and intellectual pursuits. A major problem resulting from increased leisure time will be designing education to use leisure time."

   (Dyck, 1970, pp. 13-14)

7. "A process of continuous learning, retraining and education throughout a person's career will emerge, leading to a new emphasis on adult education, post-graduate education, business education, etc."

   (Madden, 1969, as quoted in H.R.R.C., 1970, p. 277)

8. "Books in the school as it is now known may become obsolete. The teaching of specific courses for certifying students at institutions of a kind similar to today will soon become a thing of the past."

   (Gerard, 1968)

   Comment by H.R.R.C.

   "The traditional academic setting will pass because there are so many more exciting and potentially powerful ways of communicating information and interacting. Records kept on computer, of the students' interaction, will provide automatic certification. In a few years and certainly in a few decades books themselves will be obsolete. The teacher will not disappear but his role will certainly change. The lecture will disappear as the method of imparting information. Computerized courses for teaching subjects such as statistics and German will greatly speed up a student's learning."

   (H.R.R.C., 1970, pp. 273-274)

9. "By the use of the new techniques of mass communications, we can expect an enormous revolution in education. For one thing, American and European children could do much of their learning at home, under individualized conditions, with an electronic tutor geared to their own needs and paced to the beat of their own drummer."

   (Asimov, 1970, p. 20)

10. "The TV set and the mini-school will become increasingly important to education in the twenty-first century."

(Burton, 1969)

Comment by H.R.R.C.

> *"In the home, the ever-present TV set will undoubtedly play an increasingly important role as educational programs become more and more computerized. Neighborhood mini-schools will involve the parent and the child in this early process. The mini-school built into apartment complexes, public housing units, existing schools and convenient neighborhood space will permit small groups of children to be exposed to supervised learning experiences. The value of such simple experiences as association with others, trips to the zoo, watching an aquarium of fish or seeing a bulb grow and burst into flower has been readily demonstrated. Early learning accomplished by the use of the TV set and the mini-school will help to reduce the disparity which exists between the culturally deprived child and the classmate who does not suffer from this disadvantage."*

(H.R.R.C., 1970, 271-272)

11. There will be established "private or public 'learning centers' using teaching machines and offering personal tutoring to preserve humanistic aspects of education."

(Gordon & Ament, 1969, p. 36)

12. There will be established "a central data storage facility (or several regional facilities) with wide public access (perhaps in the home) for general or specialized information retrieval, primarily in the area of library, medical, and legal data."

(Gordon & Ament, 1969, p. 20)

13. "Flexible programs will enable each student to advance at his own pace in the twenty-first century."

(Burton, 1969)

Comment by H.R.R.C.

> *"Within the classroom, the organization of material will provide the greatest flexibility in the program. It will permit the student to receive an education commensurate with his ability. It will allow him to advance at his own rate of speed and will be adaptable to both the unique needs of the student and the community in which he must live and function. Tomorrow's teachers will*

play a totally new role. Group instruction must give way, in the face of increased technological advances, to a co-ordination and direction by teachers of individual inquiry. The teacher must develop with other specialists the programmed learning which the student will use."

(H.R.R.C., 1970, p. 275)

14. "The era of person-to-person teaching -- the teaching of specific states, facts, etc. -- will give way to the age of student enquiry and discovery in the twenty-first century. The teacher will provide the direction, and if necessary, the stimulus toward the learning process. This will be a lifelong benefit."

(Burton, 1969, quoted by H.R.R.C., 1970, p. 260)

15. "Greater sophistication of techniques for predicting aptitudes and success will lead to an efflorescence of psychological testing. There will be a growing tendency to cultivate an elite of 'social servants' or 'philosopher kings' who will receive a deeper level of schooling."

(Michael, 1967)

Comment by H.R.R.C.

"The elite will be identified by their wits, superior drive, or aspirations even before they reach high school so that their special education can begin early. The testing will result in a lessening sense in the individual of the feeling that one can make of the world what one wishes. We are in for a modern form of Calvinism where--- foreordainment will be found in a psychological test. Such a reduction in the individual's sense of potency and ability to make his own way in the world will inevitably produce profound changes in values about the individual's freedom."

(H.R.R.C., 1970, p. 276)

16. "The school tomorrow will be an integral part of the community. It will be constructed with community needs in mind, and designed flexibly enough to meet these needs."

(Burton, 1969)

Comment by H.R.R.C.

"The facilities of the school of tomorrow in the twenty-first century will include a library, a medical center, a recreational center and many multi-purpose class areas which will serve the community and make the school a focal point in community life for both young and old alike."

(H.R.R.C., 1970, p. 225)

17. "With the decline in the establishment and control of standards by church and home, educational programs will be asked to assume more responsibility for the "teaching" of attitudes and values."

(Schalock, 1970, p. 39)

18. There will be available publicly "cheap non-narcotic drugs (other than alcohol) for the purpose of producing specific change in personality characteristics, such as alterations in attitudes and life styles."

(Gordon & Ament, 1969, p. 27)

19. It will be possible to use "drugs to raise the level of intelligence (other than as dietary supplements and not in the sense of only temporarily raising the level of perception)."

(Gordon & Ament, 1969, p. 25)

20. "Teaching how to live with ambiguity, to identify with an adaptive process, to make a virtue out of contingency, and to be self-directing. This will be the task of education."

(Bennis, 1966)

(Bennis, 1966)

Comment by H.R.R.C.

> *"If a child has been taught that the purpose of life is service to the future of mankind, if he has been told that the story of mankind is the story of heroes, of those who serve the future, he will find himself on the path toward immortality. If, on the other hand, he has been told that the function of life is to seek pleasure, and to be pleased, he will resent death as though he has been cheated. He will seek pleasure with a vengeance, excluding awareness by turning away from life, and in doing so, he will destroy life. Eventually, the 'pleasure principle' leads to the denial of life. Ultimately, the only way to close out life is by suicide -- even destroying others will not suffice for long."*

(H.R.R.C., 1970, pp. 253-254)

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APPENDIX II

Delphi Investigation: Teacher Education in the Future

PART II

PART III

THE UNIVERSITY OF ALBERTA
FACULTY OF EDUCATION

Delphi Investigation: Teacher Education in the Future

PART II

Statements descriptive of teacher education as identified by respondents in Part I of this study are submitted here for your further consideration.

The Task - Mark with an "X" the most likely date (50% probability) when you think the statement will be descriptive of teacher education. If you believe that the statement is descriptive of teacher education now, or will be by 1975, mark an "X" in the first column. If you believe that the statement will never be descriptive of teacher education, mark an "X" in the column headed "Never." A space is provided should you wish to give reasons for your choice.

Deadline - Please return these sheets to the Dean, Faculty of Education, The University of Alberta, by February 1.

STATEMENTS	PROBABLE DATE OF OCCURRENCE					REASONS
	1971 - 75	1975 - 85	1985 -2000	After 2000	Never	
1. Teacher education will be the responsibility of universities or university related institutions.						
2. There will be no institutions devoted to preparing teachers, i.e. teachers will be prepared but not in institutions.						
3. Teacher education programs will average six years of university level preparation before first certification.						

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
4. Teacher education will be centred around an extended internship.						
5. Whereas now nearly all teachers are prepared for teaching at the Grades 1-12 (or 13) level, up to half will be prepared for teaching at earlier or later levels such as nursery, kindergarten, adult, and continuing education.						
6. Teacher education will be just about the same as it was in 1969-70.						
7. Teacher education will continue throughout the teacher's career, with frequent use being made of sabbatical leave for one or two semesters to be spent in university.						
8. Teacher education will be involved with constant or periodic re-evaluation of teachers who will have to requalify to retain certification.						
9. Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in:						
(a) speech: articulation, enunciation, modulation, etc.						

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
(b) English usage: appropriate oral and written language.						
(c) Mental health: warmth, understanding, poise, absence of hostility, etc.						
(d) Human relations: ability to relate to young people and to work with others both young and old.						
10. Teachers and teachers' organizations will share control of teacher education about equally with teacher education institutions in:						
(a) Determining the overall goals of teacher education.						
(b) Determining the curriculum and procedures used in teacher education institutions.						
(c) Recruitment and selection of candidates.						
(d) Determining which candidates have successfully completed the program and warrant certification.						
11. Teachers will be prepared more intensively as subject specialists.						

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
12. Certification (or its equivalent) will be specific to the area of specialization.						
13. Candidates for teaching will have to choose between two major branches of teacher education: one based on educational technology (including curriculum development) and the other based on psychology (diagnosis and prescription of learning).						
14. The mass approach to the preparation of teachers will be supplemented by a highly individualized and very expensive sequence of field experiences extending from orientation to teaching to post-program assistance, using extensive human and technetronic resources.						
15. Teacher education will be based upon an individual learning contract established directly between the neophyte and a representative board of scholars, professionals, and government representatives, the contract content to be determined by the gap which exists between the student's present capabilities and the minimal standards required for the professional work in which he seeks to specialize.						

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
16. Although there will be a common core of learnings for all, each candidate's program will be individually tailored.						
17. The common core learning required of all teachers will include:						
(a) Preparation in working as a member and as a leader of a group or team which may be a mixture of superordinates and subordinates, or persons all at one professional level.						
(b) A great deal of attention to ethics, morals, attitude development and character formation.						
(c) Preparation i. the use of the latest educational technology and media.						
18. Teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of:						
(a) Function (curriculum materials developer, diagnostician of learning difficulties, counsellor).						
(b) Level (nursery to university).						
(c) Staff differentiation (teacher, supervisor, administrator).						

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
19. General education and subject matter specialization will be relegated to the background in favor of psychological and sociological studies, studies of cultural values, guidance techniques, and the like.						
20. The traditional boundaries between discipline methodology will disappear, i.e. general methods related to the cognitive disciplines will displace specialized methods in specific subjects.						
21. Teacher education will emphasize the process of learning (observing, classifying, inferring, enquiring, reasoning, remembering) as contrasted with the product (information, knowledge, concepts, generalizations).						
22. Lectures as we now know them will be almost completely displaced by combinations of self directed study, tutorials, the use of new technology such as computer dialed instruction, simulation, TV, micro teaching and the like.						
23. The majority of professors of education will spend as much time in the field with children and with teachers as they do in the university.						

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
24. The university professor of education will remain only as a research scholar.						
25. There will be a disillusionment with innovation and change in teacher education.						
26. Teacher education will be producing teachers who are highly specialized both in individualization and in group processes.						
27. Teacher education will be involved in making education an effective force for reducing social and other inequalities.						
28. Teacher education will provide little if any commonalities of experience and no established minimum or maximum time requirement.						

Name: _____

Institution: _____

Date: _____

THE UNIVERSITY OF ALBERTA
FACULTY OF EDUCATION

Delphi Investigation: Teacher Education in the Future

PART III

Some of the statements descriptive of teacher education as identified by respondents in Part I are listed below for your further consideration. The responses provided by panelists in Part II show that one is bipolar in that there are two clusters of "the likely date," while others show spread or scatter over all or most of the possible dates. The results achieved to date are provided in percentage form. Considering this added information, and in the case of item 6 further clarification, we request that you re-do the items below. As before mark with an "X" the most likely date (50% probability) when you think the statement will be descriptive of teacher education. If you believe that the statement will never be descriptive of teacher education, mark an "X" in the column headed "Never." Please give reasons for your choice.

Deadline - Please return these sheets to the Dean, Faculty of Education, The University of Alberta, by February 28.

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
6. Teacher education will be just about the same as it was in 1969-70.	55%	0%	0%	0%	45%	

For this item, 55% of the respondents marked 1971-75 and 45% marked never. The statement includes the qualification "just about" before "same" hence includes the concept of change. It was included to cover the possibility of a very slow rate of change, which could be indicated by placing the X in the 1975-85, 1985-2000, or after 2000 columns, depending on the panelist's view. Panelists who accept the idea of gradual change should mark the 1971-75 space. Those who expect rapid, immediate, and extensive change should mark never. Please give the reasons which explain your choice of mark.

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
9. Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in:						
(c) Mental health: warmth, understanding, poise, absence of hostility, etc.	25%	35%	25%	0%	5%	no response 10%
(d) Human relations: ability to relate to young people and to work with others both young and old.	30%	30%	25%	0%	10%	no response 5%
10. Teachers and teachers' organizations will share control of teacher education about equally with teacher education institutions in:						
(b) Determining the curriculum and procedures used in teacher education institutions.	20%	35%	25%	0%	25%	
11. Teachers will be prepared more intensively as subject specialists.	30%	25%	0%	0%	35%	no response 10%

STATEMENTS	PROBABLE DATE OF OCCURRENCE 1971 - 75	1975 - 85	1985 -2000	After 2000	Never	REASONS
12. Certification (or its equivalent) will be specific to the area of specialization.	25%	30%	30%	0%	20%	
15. Teacher education will be based upon an individual learning contract established directly between the neophyte and a representative board of scholars, professionals, and government representatives, the contract content to be determined by the gap which exists between the student's present capabilities and the minimal standards required for the professional work in which he seeks to specialize.	20%	35%	25%	0%	25%	
20. The traditional boundaries between discipline methodology will disappear, i.e. general methods related to the cognitive disciplines will displace specialized methods in specific subjects.	20%	20%	20%	10%	30%	
25. There will be a disillusionment with innovation and change in teacher education.	25%	40%	5%	0%	25%	no response 5%
27. Teacher education will be involved in making education an effective force for reducing social and other inequalities.	15%	35%	20%	5%	25%	

APPENDIX III

Delphi Investigation: Teacher Education in the Future

PANELISTS' RESPONSES TO PARTS II AND III

APPENDIX III

Panelists' Responses to Parts II and III

The 38 items in the following list are arranged in descending order of consensus. Initial responses to all items in Part II together with reconsidered responses to the 10 items in Part III are included as is a summary of the comments made by panelists. These comments are arranged in order of frequency ie. the idea expressed in the first comment was echoed by a number of panelists, and so on. The probable dates of occurrence are presented in terms of the number and per cent of panelists who choose each date. The number on each item is the number which indicated the order in Part II or in Part III.

For example, the first statement below happened also to be the first statement in Part II. When asked to mark when the statement would be descriptive of teacher education 31 panelists (78%) marked 1971-75 and 8 (20%) marked 1975-85 with 1 (3%) not responding. A common comment was "Assume we mean North America" and so on.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
1. Teacher education will be the responsibility of universities or university related institutions.	31 78%	8 20%				1 3%

Assume we mean North America. Responsibility must be restricted to exclude finance and certification. The only reason for delay is where there is no university in a center which has a well-established teacher's college. Teachers need a composite preparation. True now in Western Canada.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
9(d) Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in human relations: ability to relate to young people and to work with others both young and old.						
Part III	18 45%	19 48%	1 3%		1 3%	1 3%
Part II	28%	50%	13%		5%	5%

Lack of this quality makes it impossible to succeed in the classroom. As supply exceeds demand selection will include this. Easier to assess than mental health. There is already considerable emphasis on this.

9(b) Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in English usage: appropriate oral and written language.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
24 60%	12 30%	1 3%		1 3%	2 5%

We have this now (Many variations of this comment). Strength in one category should compensate for weakness in another (never). This factor is used now in making judgements about practice teaching but I don't think it will ever be assessed formally.

17(c) The common core learnings required of all teachers will include: preparation in the use of the latest educational technology and media.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
22 55%	14 35%	2 5%		1 3%	1 3%

There has been a slowdown in the development of hardware because curriculum development has not caught up. More and more interest is exhibited in audiovisual.

9(c) Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in mental health, warmth, understanding, poise, absence of hostility, etc.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	11 28%	24 60%	3 8%		2 5%	
Part II	23%	55%	13%		3%	8%

This is extremely difficult to measure. This is required now. They must be healthy for certification. It is obvious that the schools will be more particular in selecting candidates starting in 1971. Perhaps by 1980 psychiatrists will have reached agreement about suitable tests. Obviously unsuitable candidates will be advised to stay out of teaching. A reaction to "existential" approaches would retard this trend. There is a growing recognition of this.

21. Teacher education will emphasize the process of learning (observing, classifying, inferring, enquiring, reasoning, remembering) as contrasted with the product (information, knowledge, concepts, generalizations).

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
20 50%	15 38%	3 8%		2 5%	

This is a matter of degree rather than either - or. We try to do this now. Already in effect. I am optimistic that this will happen by 1975. Will emphasize process but not exclude product. Both are necessary (never). Why can't both be emphasized (never).

6. Teacher education will be just about the same as it was in 1969-70

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	34 85%				6 15%	
Part II	45%	5%			35%	6 15%

There is a marked lag between change in thought and change in practice. There is an inherent conservatism in education, and teacher education can't be too far ahead. Change will not occur fast enough to make much difference in three or four years. Financial restrictions make changes slow. I'm a "gradual change" fellow. There is no certainty as to what should replace present procedures.

Never: We are at that point of history when some institutions are out of joint. Change will be rapid - it has been increasing in pace - technological change will force change in teacher education. One must distinguish between wishful thinking and reality. There are gathering forces which demand rapid and extensive change.

16. Although there will be a common core of learnings for all, each candidate's program will be individually tailored.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
4 10%	26 65%	8 20%	2 5%		

This happens to a great extent now - with the tailor being the student. Certainly will occur in some institutions. For universal application will take some time. For this, we need more instituional resources and changed staff roles, hence a slow process. The first step towards completely individualized programs will be this stage.

9(a) Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in speech articulation, enunciation, modulation, etc.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
22 55%	12 30%	2 5%		2 5%	2 5%

We have this now in some measure. Already a criterion of selection in many places. (Many variations of these comments). Speech and English usage will diminish in importance (no response). What is a "satisfactory standard of excellence"? (no response). Impractical: weak ones will counsel themselves out (never).

2. There will be no institutions devoted to preparing teachers, i.e. teachers will be prepared but not in institutions.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
1 3%	2 5%	4 10%	6 15%	27 68%	

There will likely be some organized institutional body. Can't be done without some kind of institutionalization. (Many variations of these comments). Even apprenticeship or internship would have to be run by some institutions such as school boards or teachers' organizations. The need to meet formal requirements for certification will continue. Teacher education requires a staff with definite abilities and understanding not found in other parts of the educational system. As long as we have institutions, we will have a subset which prepares teachers. Hopefully, the situation where thousands congregate for "learning" may vanish.

26. Teacher education will be producing teachers who are highly specialized both in individualization and in group processes.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
5 13%	21 53%	12 30%		2 5%	

This development might occur sooner if we knew more about these processes. Hopefully, we are doing some of this now. A desirable goal which will be realized in time. Such preparation is for highly selected individuals at the post-graduate level (never).

8. Teacher education will be involved with constant or periodic re-evaluation of teachers who will have to requality to retain certification.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
	16 40%	17 43%	4 10%	2 5%	1 3%

Should come but seems slow in coming. Possibly, but violates tenure - has been tried but abandoned because of teacher resistance. This is a pious hope I hold, but necessary for improvement. One of the problems involved must be the acceptance by the various professional associations of the fact that people need to be re-evaluated in terms of certification and decertification. Some states in U.S.A. already favor renewable certificates. Periodic retesting and requalification - No (a never response). Professionally responsible persons will maintain and increase their competence without whips (never).

22. Lectures as we now know them will be almost completely displaced by combinations of self directed study, tutorials, the use of new technology such as computer dialed instruction, simulation, TV, micro teaching and the like.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
2 5%	22 55%	11 28%	2 5%	3 8%	

We have enough evidence now to abandon the lecture. For thirty years I have been hearing about the demise of the lecture but at last report it is still vigorous and still employed. Individually tailored programs don't lend themselves to the lecture approach. The trend in this direction is strong now. Delay is caused by lack of availability of good technical equipment. I wish I could say differently (never.)

24. The university professor of education will remain only as a research scholar.

1971 -71	1975 -85	1985 -2000	After 2000	Never	No Response
2	1	4	1	30	3
5%	3%	10%	3%	75%	8%

Never: It becomes increasingly apparent that one cannot work effectively in education with both feet in the ivory tower. There will always be a place for more than the research scholar. He would not then be a professor of education. There will be some professors who are only research scholars. Public expectation is that he be a teacher as well as a researcher. This is too narrow a definition. I hope not.

Will Occur: I think there is a tendency in this direction but it will be limited. Some will, no doubt, but it won't be soon. This type of person is found in many faculties now but in small numbers.

18(a). Teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of function (curriculum materials developer, diagnostician of learning difficulties, counsellor).

1971 -71	1975 -85	1985 -2000	After 2000	Never	No Response
3	25	6		2	4
8%	63%	15%		5%	10%

This should be at the graduate level.

17(a). The common core learning required of all teachers will include preparation in working as a member and as a leader of a group or team which may be a mixture of superordinates and subordinates, or persons all at one professional level.

1971 -71	1975 -85	1985 -2000	After 2000	Never	No Response
7	24	6	1	2	
18%	60%	15%	3%	5%	

There is a good deal of this in our program now. It is done now.

Never: Team teaching will be ephemeral.

18(b). Teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of level (nursery to university).

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
10	21	3	1	2	3
25%	53%	8%	3%	5%	8%

I see the common core between an elementary school teacher of mentally retarded children and an instructor in university physics as being considerably less than half (never).

13. Candidates for teaching will have to choose between two major branches of teacher education: one based on educational technology (including curriculum development) and the other based on psychology (diagnosis and prescription of learning).

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
	4	5	4	26	1
	10%	13%	10%	65%	3%

Never: I fail to see the distinction as being likely or desirable. The functions to be served will be much more diverse. I cannot accept the two major branches of teacher education given. These should not be divorced These two categories are hardly all-inclusive enough. There will not be such a clearcut dichotomy. How did curriculum development get divorced from diagnosis and prescription of learning.

Will Occur: This would come after certification at the graduate level.

7. Teacher education will continue throughout the teacher's career, with frequent use being made of sabbatical leave for one or two semesters to be spent in university.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
7	20	10	2	1	
18%	50%	25%	5%	3%	

Very important and very likely. The profession will demand it. Now being done. This is evident now. Currently in effect. The concept of self-renewal will be the main thrust in the 70's. It will probably be tied in with internship to provide replacement staff. Not necessarily "in the university". If you mean that there will be no initial teacher education - never.

10(a). Teachers and teachers' organizations will share control of teacher education about equally with teacher education institutions in determining the overall goals of teacher education.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
9	20	5		5	1
23%	50%	13%		13%	3%

The condition has nearly been reached now. The public will continue to play a considerable role. Teacher organizations will share in determining goals but freedom of the university will be jealously guarded. Teacher organizations are already exerting pressures in this direction but they are not ready to accept some of the

responsibility which go along with determining which candidates warrant certification.

Never: Influence of teachers' organizations will increase but there must always be participation by government, school boards and parent groups.

23. The majority of professors of education will spend as much time in the field with children and with teachers as they do in the university.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
2 5%	20 50%	9 23%	1 3%	6 15%	2 5%

I could only hope it would be immediately but have chosen the next five-year plan. Would that it could be! The scene of action is beginning to shift to the schools as internship becomes more popular. While there will be an increase in the number of "clinical" professors I doubt that it will be a majority and certainly not in the near future. A real difficulty is posed by a large university surrounded by a small school system.

Never: I doubt this unless we turn out a completely new type of professor. I doubt that it will ever reach 50%.

5. Whereas now nearly all teachers are prepared for teaching at the Grades 1-12 (or 13) level, up to half will be prepared for teaching at earlier or later levels such as nursery, kindergarten, adult, and continuing education.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
3 8%	18 45%	11 28%	6 15%	1 3%	1 3%

The signs are apparent, but to predict its growth to the scale stated is optimistic (several variations of this). The demand for continuing education may make this true after 2000. A surplus of teachers might bring this about sooner. The age-level split is not the only one, nor even the major one. The majority of education will occur at the elementary and secondary levels so preparation must be focused here - but there will be a significant increase in the levels (never).

4. Teacher education will be centred around an extended internship.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
4 10%	17 43%	11 28%	1 3%	4 10%	3 8%

The trend is strong in this direction now. This is being done now in many localities. By 1985 teacher organizations will have much greater influence and only then will it be possible. Internship will never replace university education. The trend to internship will increase but not to the extent that teacher education will center around it. Teacher education involves arts and science courses and I doubt that these will ever be designed to relate to internship. Depends on the definition of internship (no response).

28. Teacher education will provide little if any commonalities of experience and no established minimum or maximum time requirement.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
	5 13%	5 13%	5 13%	22 55%	3 8%

I believe there will be commonalities of experience and minimum time requirements. I should like to see this happen soon but it is an expensive form of training. The global world forces us to focus on commonalities.

Never: If this happens we have no teacher education and we do have chaos. Commonalities and time requirements will always be necessary or chaos will result. The people who certificate will probably never permit this amount of flexibility - and probably they are right. Some core of common experiences should remain.

27. Teacher education will be involved in making education an effective force for reducing social and other inequalities.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	5 13%	22 55%	4 10%		9 23%	
Part II	15%	38%	20%	3%	15%	10%

This has been a hope and an aim of educators. This is a trend now and will be a function of education eg. intercultural and inner city education. If it means a consciousstriving to change society sutely this is the responsibility of an educated person. Concern over social inequalities is mounting and is affecting teacher education. The key word is effective.

Never: This is not the job of the school. Who the hell do educators think they are! Teachers will come more and more from the upper middle class and schools will be more middle class than ever. In the broadest sense this is a goal of all education, but if it means a dewey-eyed liberal idealist idea, then nonsense.

10(c) Teachers and teachers' organizations will share control of teacher education about equally with teacher education institutionism in recruitment and selection of candidates.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
6 15%	21 53%	5 13%		7 18%	1 3%

Cooperating teachers have a major voice in who passes and who fails in student teaching. Cooperative planning is already in effect.

17(b). The common core of learning required of all teachers will include a great deal of attention to ethics, morals, attitude development and character formation.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
5 13%	19 48%	7 18%	3 8%	3 8%	3 8%

This has to come but we are a long way from agreement as to what ethics, what morals, etc. Surely this does not means indoctrination. Only if "attention to" does not mean "indoctrination in". We are entering a period in which a concentrated effort will be made to combat the permissiveness of modern times. Trends indicate that this will be requested and will be implemented.

Never: I would hope so, but am too much of a cynic to expect this unless the millenium is here!

12. Certification (or its equivalent) will be specific to the area of specialization.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	5 13%	20 50%	6 15%		8 20%	1 3%
Part II	20%	40%	18%		15%	8%

This step is long overdue. Teachers and boards both demand it. This exists now in some teaching fields. Pressure from placement officers will bring this about. Provincial governments control this and they are slow to change.

Never: It is the business of the employer and the teacher to match the applicant to the job. Teachers who know one small area of education create more problems than they solve. Teachers must be generalists first!

25. There will be a disillusionment with innovation and change in teacher education.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	10 25%	16 40%	2 5%		11 28%	1 3%
Part II	23%	25%	5%	13%	33%	3%

Some are disillusioned now - there will always be some who are. There will be some from the old dogies. There will be disillusionment with the slow speed of it. One could mark all periods, as there is always disillusionment.

Never: The force of conservatism is not strong enough to hold back innovation. Change will increasingly be part of life. Not while innovation and change produce improvement.

19. General education and subject matter specialization will be relegated to the background in favor of psychological and sociological studies, studies of cultural values, guidance techniques, and the like.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
1 3%	8 20%	4 10%	2 5%	23 58%	2 5%

There will be more emphasis on the behavioral sciences but subject matter will remain prominent. I have interpreted this to mean more emphasis on the other factors. General education is consistent with psychological and sociological studies, etc.

Never: Both are important. Secondary school teachers must have considerable knowledge in their teaching subject. There will always be a place for general programs in some subjects. The latter items should gain increased prominence but never displace the former. Never, because of the"what" of teaching. The balance will change but both will be important. If anything general education will receive more emphasis

10(b). Teachers and teachers' organizations will share control of teacher education about equally with teacher education institutions in determining the curriculum and procedures used in teacher education institutions.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	5 13%	17 43%	8 20%		10 25%	
Part II	13%	42%	23%		20%	

This is looming on the horizon now. More and more dialogue is going on between teacher education institutions and teachers' organizations. This may be done by extension of clinical professors. This is already being done at many institutions. It won't come immediately because human nature is too conservative.

Never: With the present concept of a university they can never share in curriculum and procedures. Teachers' organizations have other more immediate concerns. The teacher education institution has the major overall responsibility. There is no marshalling of forces demanding greater control.

10(d). Teachers and teachers' organizations will share control of teacher education about equally with teacher education institutions in determining which candidates have successfully completed the program and warrant certification

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
10 25%	15 30%	8 20%	3 8%	3 8%	1 3%

My observation and experience is that this is already happening through discussion and negotiation not through legislation. The influence of teacher's organizations in these matters will increase. These conditions have nearly been reached now.

Never: Certification is a government responsibility. Never, unless teacher organizations are charged with the responsibility for teacher education. As a participating voice only, not as a final voice.

14. The mass approach to the preparation of teachers will be supplemented by a highly individualized and very expensive sequence of field experiences extending from orientation to teaching to post-program assistance, using extensive human and technetronic resources.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
2 5%	11 28%	14 35%	2 5%	10 25%	1 3%

To do so would be to practice what we preach. The movement is in this direction. This may not take place because of financial limitations but it is highly desirable. It may come about because it could be inexpensive if introduced in a creative manner. This approach will come, dependent upon finances.

Never: Large sums of money will never be available for the preparation of teachers. Education cannot expect to take all our wealth. As stated, never - but there <u>is</u> a trend to individualized instruction.

11. Teachers will be prepared more intensively as subject specialists.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	15 38%	8 20%			17 43%	
Part II	30%	28%	3%	3%	33%	5%

Specialization is here now - the trend will continue. It is needed at the secondary level. For most teachers there will be increasing opportunity to specialize.

Never: Not <u>subject</u> specialists. Teachers must be generalists first. I detect a trend away from specialization. More emphasis will be placed on teachers as human resource persons. The trend is to less, not more. I think the proportion of subject specialists will decline.

15. Teacher education will be based upon an individual learning contract established directly between the neophyte and a representative board of scholars, professionals, and government representatives, the contract content to be determined by the gap which exists between the student's present capabilities and the minimal standards required for the professional work in which he seeks to specialize.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	1 3%	13 33%	9 23%	1 3%	16 40%	
Part II	3%	18%	28%	23%	28%	5%

This is used now by one member of our Faculty. Students don't like it and many transfer out of his class. Sure would be a change in present concepts of higher education. It is around the corner. It will be delayed by certification requirements. There are too many parts to this statement.

Never: We need a good instrument to measure teaching ability and we don't have one. Cloud ten. Precision in measuring student capabilities will never reach a point where this will be practicable.

3. Teacher education programs will average six years of university level preparation before first certification.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
	11	11	8	8	
	28%	28%	20%	20%	

The change may arrive by the middle of the next decade. The trend is in this direction but will take many years especially for elementary school teachers. This will only occur if the nature of the schools changes to allow each teacher full professional activities. It may require 6 years but perhaps not all in university - eg. internship. This may be true for some highly qualified specialists.

Never: As the affluence of our society declines we will be less able to afford such long periods of preparation. There is a limit to the time one can keep students unproductive and this limit is 5 years. Six years may be the minimum in counseling and in administration but programs will differ.

18(c). Teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of staff differentiation (teacher, supervisor, administrator)

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
5	16	6	5	3	5
13%	40%	15%	13%	8%	13%

Programs are moving in the direction now. All teachers need some but not half of this. Supervisors and administrators should be recruited from teachers. This exists now if we include graduate programs in teacher education. I would like to see such terms as supervision and administration disappear. This should be at the graduate level.

20. The traditional boundaries between discipline methodology will disappear, ie. general methods related to the cognitive disciplines will displace specialized methods in specific subjects.

	1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
Part III	7	11	5		16	1
	18%	28%	13%		40%	3%
Part II	20%	23%	15%	8%	30%	5%

True to some extent now. Each discipline has its own structure which can't be conveyed to students in a general methods course.

Never: There is need for both kinds of methods classes to complement each other. Disciplines will survive.

APPENDIX IV

Delphi Investigation: Teacher Education in the Future

CONVERGENCE

APPENDIX IV
Convergence

In the present study the per cent response of panelists in two adjacent columns was used as a measure of consensus. The ten items on which convergence was sought in Part III are listed below in descending order of convergence achieved when the panelists were provided with the percentage distribution of results from Part II and asked to reconsider.

Items with numbers as of Part II	Per cent response in two adjacent columns		
	Part II	Part III	Change
6. Teacher education will be just about the same as it was in 1969-70.	51	85	+34
25. There will be disallusionment with innovation and change in teacher education.	48	65	+17
9(d) Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in human relations: ability to relate to young people and to work with others both young and old.	78	93	+15
27. Teacher education will be involved in making education an effective force for reducing social and other inequalities.	58	68	+10
15. Teacher education will be based upon an individual learning contract established directly between the neophyte and a representative board of scholars, professionals, and government representatives, the contract content to be determined by the gap which exists between the student's present capabilities and the minimal standards required for the professional work in which he seeks to specialize.	51	56	+ 5
12. Certification (or its equivalent) will be specific to the area of specialization	60	65	+ 5
20. The traditional boundaries between discipline methodology will disappear, ie. general methods related to the cognitive disciplines will displace specialized methods in specific subjects.	43	46	+ 3

Items with numbers as of Part II (con't.)	Per cent response in two adjacent columns (con't.)		
	Part II	Part III	Change
9(c) Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in mental health: warmth, understanding, poise, absence of hostility, etc.	88	88	0
11. Teachers will be prepared more intensively as subject specialists.	58	58	0
10(b) Teachers and teachers' organizations will share control of teacher education about equally with teacher education institutions in: determining the curriculum and procedures used in teacher education institutions.	66	63	- 3

APPENDIX V

Delphi Investigation: Teacher Education in the Future

PANELISTS' RESPONSES TO PART IV

APPENDIX V

Panelists' Responses to Part IV: The Probable Date of Occurrence in the Panelists' Own Institutions

Item one of Part II was dropped from Part IV. The remaining 37 items are presented below in descending order of consensus. The comments of panelists, with some omissions where there was unnecessary repetition, are presented in the order in which the replies were analyzed. The probable dates of occurrence are presented in terms of the number and per cent of panelists who chose each date. The number on each item is the number which indicated the order in Part IV. For example, the first statement below was item 17 in Part IV. When asked to mark when the statement would be descriptive of teacher education in their own institutions, 21 panelists (54%) marked 1971-75, 17 (44%) marked 1975-1985, and 1 (2%) marked "Never". Comments recognized the growing attention being given to the use of the technologies in teacher education.

17. The common core learning required of all teachers will include:

    (c) Preparation in the use of the latest educational technology and media.

1971 -75	1975 -85	1985 -2000	After 2000	Never	No Response
21 54%	17 44%		1 2%		

If we can quadruple existing facilities and personnel. The trend is well underway. -- Student not teacher use of new technologies.-- Educators are beginning to recognize the importance of the media.

9. Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in:

   (b) English usage: appropriate oral and written language.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
25 64%	12 31%	1 3%			1 3%

Already in force. -- Refers to all candidates for deliberate screening. -- Demand for selection procedures will result in research and experimental attempts to solve problems associated with selection.

21. Teacher education will emphasize the process of learning (observing, classifying, inferring, enquiring, reasoning, remembering) as contrasted with the product (information, knowledge, concepts, generalizations).

1971-75	1975-85	1985-2000	After 2000	Never	No Response
16 41%	21 54%		2 5%		

More and more of this is happening now. We emphasize the process aspect but with consciousness of both process and product.-- Both are important. -- It is hoped that these concepts are being stressed now.

26. Teacher education will be producing teachers who are highly specialized both in individualization and in group processes.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
2 5%	30 77%	6 15%	1 3%		

This is the current objective. -- We see these as legitimate goals in teacher education but we are not prepared to realize these ends. -- If we do not do this by 1975-85, we should close the doors and find other work. -- These are deemed to be important.

9. Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in:

(a) speech: articulation, enunciation, modulation, etc.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
25 64%	11 28%	2 5%			1 3%

Increasing attention will be paid to these factors, both for admission and for first certification. -- In admission practices, as presently followed, we already take this into account. We do not have any specific testing program, and I doubt, unless psychologists can develop much more reliable tests, that we will. -- What is "satisfactory"? We have minimum standards now. We can expect them to be raised steadily. -- Standards could be more stringent.

2. There will be no institution devoted to preparing teachers, i.e. teachers will be prepared but not in our institution.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
1 3%	1 3%	1 3%	7 18%	29 74%	

Never is a long, long time. -- I would anticipate some involvement of this institution for all time. The involvement of outside groups will increase. -- There will be no one institution devoted to the task. -- Our institution as it exists now, will probably disappear by 1975 to reappear as part of a university institution. -- The institution devoted to research in teacher education must also be the one that is responsible for the application of the research. -- I think there will be an increased amount of teacher preparation in the field, but part will remain in designated institutions.

17. The common core learning required of all teachers will include:

(a) Preparation in working as a member and as a leader of a group or team which may be a mixture of superordinates and subordinates, or persons all at one professional level.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
10 26%	25 64%	2 5%		2 5%	

For many, yes; for all, no. Why make the assumption that team teaching will replace individual teaching to this extent. -- Psychology, child development, and curriculum organization will be the focus of any core learnings for teachers. -- Needs of the field necessitate this. -- Already included but not extensively.

9. Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in:

   (d) Human relations: ability to relate to young people and to work with others both young and old.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
17 44%	17 44%	3 8%	1 3%	1 3%	

We introduced human relations training this year. It is too soon to evaluate the effectiveness of the program -- Evaluation is informal and subjective only.

9. Candidates for teacher education, both for admission to preparatory programs and for first certification, will be required to exhibit a satisfactory standard of excellence in:

   (c) Mental health: warmth, understanding, poise, absence of hostility, etc.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
16 41%	18 46%	2 5%	1 3%	2 5%	

Difficulty to appraise on entry. Observation is used throughout the training period to assess the level of mental health. -- Possible only to the extent that evaluation of mental health is part of the evaluation of practice teaching.

16. Although there will be a common core of learnings for all, each candidate's program will be individually tailored.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
10 26%	23 59%	6 15%			

I see a small core (15-20%) for all teachers, a large common core (25-40%) for those in such specific areas of teaching specialization as secondary school mathematics or social studies. The rest would be elective experiences. -- This is essential. -- Not in our institution but in an integrated one. -- Some evidence that this is occurring now. -- Makes sense.

18. Teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of:

    (a) Function (curriculum materials developer, diagnostician of learning difficulties, counsellor).

1971-75	1975-85	1985-2000	After 2000	Never	No Response
12 31%	20 51%	3 8%		2 5%	2 5%

Is there no place for general education? -- The provision will differ with the function. -- We are moving toward this now. -- We want this, but it will take time. -- Not in undergraduate programs. -- Difficult to respond to this item within the given constraints.

28. Teacher education will provide little if any commonalities of experience and no established minimum or maximum time requirement.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
1* 2%	4** 10%	3 7%	7 17%	27* 64%	

*Some respondents checked twice to indicate a separation re no minima and no maxima.

There will be common experiences, more flexibility of requirements, but some established minima. -- One respondent divided his response: "Never" with respect to commonalities; 1975-85 with respect to no maxima or minima. -- "Never" applies to the first part. -- A reasonable but idealized goal in light of shifts in attitudes among people in various categories of public education. -- Flexible we may become, but never that flexible. -- Too idealistic. -- This already applies to some teachers, but as a general description of formal teacher education, it seems inapplicable. -- There are experiences and skills common to all levels of teaching which should be included in our teacher education program. Minimum and maximum time requirements may change.

10. Teachers and teacher's organizations will share control of teacher education about equally with our teacher education institution in:

(c) Recruitment and selection of candidates.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
5 13%	20 51%	11 28%		3 8%	

More readily done by the teacher education institution. -- Our program may lead to involvement but not on an equal basis. The Faculty of Arts and Science will be involved more than the profession. -- This we should like to see: little indication at present of an active interest.-- In so far as encouraging students to choose the profession of teaching and helping university personnel in evaluating students.

18. Teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of:

(b) Level (nursery to university).

1971-75	1975-85	1985-2000	After 2000	Never	No Response
13 33%	18 46%	3 8%	2 5%	1 3%	2 5%

The size of the program here inhibits.

5. Whereas now nearly all teachers are prepared for teaching at the Grades 1-12 (or 13) level, up to half will be prepared for teaching at earlier or later levels such as nursery, kindergarten, adult, and continuing education.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
2 5%	13 33%	17 44%	6 15%	1 3%	

Mostly because of growth of post-secondary and continuing education programs.-- Though level will be important, nature of task will be even more so. -- More than half of our students are already being prepared for teaching at earlier levels but with no special certification provided. -- We are instituting a graduate program in continuing education. This makes possible the offering of some undergraduate courses in adult education. Our enrolment in early childhood education is 3 to 4%. These areas are not likely to be in majority by 1985. -- There is trend in this direction. -- Doubtful in a small university. -- There will be increased emphasis on early childhood education but high costs will delay large-scale programs. -- The supply-demand ratio favors this. -- Policies here suggest that such a change will come later than in other parts of North America.

24. The university professor of education will remain only as a research scholar.

(Note: Panelists from Teachers' Colleges may omit this item).

1971-75	1975-85	1985-2000	After 2000	Never	No Response
			3 8%	26 67%	10 26%

This implies acceptance of an academic snobbery which denies a professorship to the eminent practitioner who is not primarily a scholar. Even now this is not true. -- Every faculty should have a number of staff members whose major input is research; however, it is not desirable to have all nor even a majority in this category even if teacher education as we perceive it is given over to the schools. -- Maybe, but what a dreary dry well of material he and his research will be. -- Teaching has priority over research here. -- Some, but not all. Am not sure about this.

8. Teacher education will be involved with constant or periodic re-evaluation of teachers who will have to requality to retain certification.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
	16 41%	13 33%	2 5%	7 18%	1 3%

It would be a mistake to legislate what must be a professional responsibility. -- For "certification" read "continued employment". -- This may happen here but I doubt that it is possible. I believe that Departments of Education will continue to exercise considerable influence and will make the crucial decisions. We will probably be involved in the retraining process <u>if</u> it is adopted. -- Have doubts. -- Some teachers will need to be stimulated to keep abreast of developments. -- I see this coming gradually; most likely it will be initiated by teachers' organizations. -- I think this would be strongly opposed by teachers' organizations. -- Will take time since the teaching profession has been slow about recognizing this factor. -- A good idea but hard to introduce. -- Unless more adequate techniques of evaluation are developed, such re-evaluation will be largely arbitrary and will serve "political" rather than pedagogical purposes. -- Present proposals to do this may be accepted by 1985. -- Hopefully.

10. Teachers and teachers' organizations will share control of teacher education about equally with our teacher education institution in:

    (a) Determining the overall goals of teacher education.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
7 18%	21 54%	6 15%		4 10%	1 3%

But don't forget that professional organizations and teacher education institutions will not be the only contributors to this decision. -- Teachers and teachers' organizations are involved in all of these in that we use practising teachers as associates in our teacher education program. These individuals sit as regular faculty members during the period of their appointments. They have not exercised their opportunities as fully as desirable but certainly have a "say" in all aspects of our program. Control will probably remain with the University and the Department of Education. -- Professional organizations have been involved, directly and indirectly, in setting goals for pre-service training. -- Because teachers in classrooms are guiding neophytes, they have considerable influence - much more than they realize. -- Not in our institution but in the one to be created by integration. -- This clashes with the university's autonomy but universities will be influenced by teacher's organizations. -- Teachers' associations will participate in planning and general policy determination but not in control in the direct sense. -- Question the "equally".

7. Teacher education will continue throughout the teacher's career, with frequent use being made of sabbatical leave for one or two semesters to be spent in our institution.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
5* 13%	17* 43%	11 28%	4 10%	2 5%	1 3%

*One respondent placed a check in both boxes.

Not necessarily in our institution, but there will be increasing

learning through a variety of agencies and resources. -- "None" if you define "in our institution" narrowly; by 1985-2000 if the emphasis is on periods of leave for retraining. -- The first part of this statement is strongly supported by our institution -- sabbaticals are encouraged, but other provisions for continuing education are also successful. -- I agree with the first part of the statement and believe it is well under way. The time will not, however, necessarily be spent in our institution, but elsewhere in a research unit, an experimental situation, another country. -- This trend is apparent here, forced by curriculum change and a realization by teachers that they lag professionally. -- High costs will cause delay. -- Initially for transfers from one type of teaching to another. -- To a limited extent. -- Being implemented now. -- The sooner the better. -- Depends on the economic climate but, taking the optimistic view, I see school boards incorporating this as a kind of in-service education program.

4. Teacher education will be centred around an extended internship.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
4 10%	17 44%	10 26%		8 21%	

Our twelve-month professional program has for six years included a six-month type of internship. -- Extended internship will be possible as we have a more highly qualified professional body of teachers. -- One possibility among many we hope to explore. -- Maybe never; "centred" is a strong word. -- Shared between schools and universities. -- Internship patterns will be dominant by 1975-85; after that there will be a renewal of contact with professors and courses. -- The trend is obvious. -- An internship will be an important, even vital part, but not the main or central concern. -- Pressures seem to be building up toward this. -- We plan to introduce this on an experimental basis within the next five years.

12. Certification (or its equivalent) will be specific to the area of specialization.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
3 8%	24 62%	3 8%		9 23%	

Multiple certificates are not necessary if the employer and the employee accept their responsibility to match qualifications with jobs. -- Area is interpreted as type of function and not subject clusters such as language arts. -- Narrow certification is not accepted as desirable. If teachers are continuously in training, they will be judged for the job they do, not the certificate they hold. -- Not because this is desirable, but because of increasing pressure for this approach. -- Depend on whether it involves basic or added certification. -- Increasing complexity requires that candidates have a "teachable" subject. Certification by subject is sure to come. -- Already a fact in so far as present system of certification is specific to age levels. -- Likely to include general certification with recommended specialization noted. -- Certification will probably remain general, but specialization will become more important in making teaching assignments. -- Only if taken as a second certificate. Special certification in our province at either elementary or secondary levels has led to problems.

11. Teachers will be prepared more intensively as subject specialists.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
9 23%	17 44%	3 8%		10 26%	

But also as specialists in the process of learning. -- Not necessarily in the same way as they are now nor with such discrete boundaries. -- Teachers will become more interdisciplinary oriented and more attention will be placed on learning as a process and on human problems of interaction and learning. -- Contrary to global currents. -- Team teaching and differentiated staffing will add impetus to this trend. -- Only if they are to be subject matter specialists. -- Not in our institution, nor in the integrated one in so far as elementary teachers are concerned. -- Depends on the level: upper elementary, junior high, and high school teachers are being so prepared now. Early childhood education teachers tend to be, and will continue to be generalists. -- Not in traditional subjects but in subject regroupings. -- In future specialists should receive a better basic preparation in teaching before specializing.

13. Candidates for teaching will have to choose between two major branches of teacher education: one based on educational technology (including curriculum development) and the other based on psychology (diagnosis and prescription of learning).

1971-75	1975-85	1985-2000	After 2000	Never	No Response
1 3%	1 3%	9 23%	4 10%	22 56%	11* 28%

*One respondent missed marking this item.

An artificial and undesirable dichotomy. -- The forced-choice narrows the possibility of response. -- Both are necessary in a teacher education program. -- This will be but one of many choices. -- Our present model calls for diagnosis and curriculum planning according to the individual's circumstances. -- Not in our institution but in integrated institutions eventually. -- These will never be mutually exclusive. -- There is a trend toward teacher education programs becoming a training ground for amateur psychologists. -- I hope not. -- No teacher is competent without both.

23. The majority of instructors in our institution will spend as much time in the field with children and with teachers as they do in the institution.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
6 15%	15 38%	11 28%	2 5%	5 13%	

A great deal more time - yes. As much - no. -- Already in practice. -- The only restriction today is financial. -- Over 20% of the staff of this institution are at this point now. -- I know that this is a popular concept, but I wonder if it is useful for the majority. -- With reservations, about "majority". I see a trend developing toward more of this, certainly.

14. The mass approach to the preparation of teachers will be supplemented by a highly individualized and very expensive sequence of field experiences extending from orientation to teaching to post-program assistance, using extensive human and technetronic resources. 75

1971-75	1975-85	1985-2000	After 2000	Never	No Response
1 3%	14 36%	11 28%	6 15%	6 15%	1* 3%

*One respondent missed marking this item.

Mass approach will be continued, but more emphasis will be given to individualization. -- Possible, by not likely. -- We like the individual approach; where great expense is involved, count us out. -- Trends in this direction are apparent, but much depends on the interpretation of "very expensive". -- Will come in time but requires greater understanding of technology by educators to enable them to free time for this purpose. -- Would seem to be logically consistent with the philosophy which values the individual highly.

19. General education and subject matter specialization will be relegated to the background in favor of psychological and sociological studies, studies of cultural values, guidance techniques, and the like.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
1 3%	10 26%	3 8%	4 10%	21 54%	

General education and subject matter specialization will always be important in teacher education. -- Subject matter specialists will always be required. -- Not too confident about this prediction. -- The idea appeals but do not see it in this cycle. -- I doubt that this institution will relegate the arts, humanities, and sciences to the background. -- These subjects may assume greater significance in teacher education, but teachers will always require academic strength in their teaching specialization. -- I'm very much afraid that this is what will happen and I'm strongly opposed to it. -- Teachers need both varieties of experience to bring the best values to the classroom. -- For some; not for the majority. -- The teacher must always present evidence of being an "educated" person. -- As knowledge increases, retrieval processes will be required as well as the ability to apply factual information.

17. The common core learning required of all teachers will include:

(b) A great deal of attention to ethics, morals, attitude development and character formation.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
8 21%	16 41%	6 15%	2 5%	5 13%	2* 5%

*One respondent failed to mark this item.

Much depends on what is meant by "a great deal" and what kind of program is implied. Unable to answer. -- The old hang up. -- Pretty much established by the time the individual gets to university. -- Unfortunately, never. The trend is in the opposite direction - away from ethical standards. -- Students come with these products. Selection would be a better technique. -- Current emphasis points to this.

22. Lectures as we now know them will be almost completely displaced by combinations of self directed study, tutorials, the use of new technology such as computer dialed instruction, simulation, TV. micro teaching and the like.

1971 75	1975 85	1985 2000	After 2000	Never	No Response
6 15%	16 40%	6* 15%	6 15%	6* 15%	

*One respondent placed a mark in both boxes.

There will still be a place for lectures, but I hope we can break the domination of the lecture system. -- One or the other (the respondent had marked "1985-2000" and "Never") depending on what is meant by "almost completely displaced". At least the direction is clear. -- Moving in this direction. -- Lectures are useful beyond information giving. Other approaches involve learners more. -- This trend will reach its zenith in 1975-85, but will never completely displace other methods of group instruction. -- Old habits never die, they just come forth in new attire. -- Lectures will never be completely eliminated. All of the other methods will play an increasingly large role. Lectures will diminish in quantity but not in quality. -- I doubt that teachers will change to that extent. We like to hear ourselves expound and will change reluctantly if at all. -- Toward the end of this period (1975-85) we may have made sufficient progress in the preparation of materials and programs to do this.

10. Teachers and teachers' organizations will share control of teacher education about equally with our teacher education institution in:

    (b) Determining the curriculum and procedures used in our teacher education institution.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
6 15%	16 41%	7 18%	1 1%	8 2%	1 3%

A strong voice, certainly; not equal responsibility. -- As long as universities control pre-service teacher education, they will be jealous of the academic autonomy this involves. Teachers' organizations will not have control over these functions. (i.e. those in 10b, 10c, and 10d). -- This also clashes with the university's autonomy. I think the universities will be influenced greatly by what teachers want. -- They are nearly at this stage now, indirectly.

3. Teacher education programs will average six years of university level preparation before first certification.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
1 3%	3 8%	12 31%	8 21%	14 36%	1 3%

Read "employment" for "certification". -- This will depend on how teachers are defined in future. Some will undoubtedly require six or more years - others perhaps three or even less. -- We have recently moved to requiring two years for certification. We will raise that to three years by 1973, four years by 1976, and in the decade following the training period will be increased to six years. -- Unnecessary. -- Ontario moves to four years in 1973. Heavy costs involved may delay further extensions of training period for elementary teachers. -- This depends on the definition of "university level". Quebec students now have two years beyond high school (Grade XI) in a C.E.G.E.P. plus three years in a university for a B.Ed. or four years for a B.A. followed by professional training. -- It would appear more profitable for teachers to be certificated after four years and then to teach for two years before returning to continue their education. -- For some teachers only and in some programs only.

10. Teachers and teachers' organizations will share control of teacher education about equally with our teacher education institution in:

    (d) Determining which candidates have successfully completed the program and warrant certification.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
11 28%	11 28%	11 28%	2 5%	3 8%	1 3%

With rapid expansion of internship programs, teachers are being asked to assume greater responsibility for recommendation for initial certification. -- We work closely with those who supervise our students, and we do rely on their evaluations. -- This is now done in student teaching; teachers' organizations will never assess the course work of students. -- True as far as practice teaching is concerned. -- When internships are developed, teachers will be more involved. This does not, however, involve the formal teachers' organizations.

15. Teacher education will be based upon an individual learning contract established directly between the neophyte and a representative board of scholars, professionals, and government representatives, the contract content to be determined by the gap which exists between the student's present capabilities and the minimal standards required for the professional work in which he seeks to specialize.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
1 3%	8 21%	8 21%	4 10%	17 44%	1* 3%

*One respondent failed to mark this item.

I cannot see how such a system could operate. I favor extension of the learning contract idea, based on an analysis of "where you are" and "where you want to go", within existing classes. -- In theory this might be desirable, but experience with individual contracts has not resulted in improved learning nor attitudes. -- Financial difficulties will delay this approach as much as will philosophical aspects. --Cannot foresee this development. -- 1984? -- Not practicable in public education. -- Desirable but not practicable until we know better what is needed in a teacher education program. Interested. -- Not practicable for initial teaching certification, but may be introduced for some graduate work for "mature" students. -- An interesting idea, however. -- Coming. A shame that it will not come sooner. A good idea, but very expensive. -- Elements of the program will no doubt be determined this way, but I doubt that the whole program will be handled in such a manner.

18. Teacher education will be about half "common core" for all candidates and about half specific to specialization in terms of:

    (c) Staff differentiation (teacher, supervisor, administrator).

1971-75	1975-85	1985-2000	After 2000	Never	No Response
3 8%	18 46%	3 8%	4 10%	8 21%	3 8%

But "supervision" and "administration" are not mutually exclusive. -- This will occur only at graduate level. -- Other ways possible. -- Never in the initial training period. -- Size of program here inhibits. -- Supervisors should first qualify as teachers. -- Slower acceptance, but coming. If the question refers to the total B.Ed. program (and not to post-B.Ed. programs), I would mark "Never".

27. Teacher education will be involved in making education an effective force for reducing social and other inequalities.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
5 13%	15 38%	1 3%	5 13%	7 18%	6* 15%

*Comments suggest that one respondent may have meant "Never".

If this involves a high degree of "social engineering", I disagree. If teacher education were to make poeple more sensitive to the existence of such problems and better able to work with others, it may be a strong force.-- Again depending on meaning and emphasis. -- Happened long ago in this institution. -- A very fatuous item. -- There will be a large effort in this direction. -- Not a proper function. -- Essential task enjoined by all teachers, but I doubt our competence to achieve much at present. -- Education loses its real meaning if it becomes a platform for propaganda; however, a better education may resolve many present inequalities. -- I don't quite understand the implications of this. If I understand it to mean that teacher education is to become a spearhead of a movement for social reform (a la George Counts) I would say never. -- I hope that this will happen, but we often expect too much from our schools. -- Teacher education is not designed to indoctrinate young people into Maoist-philosophy!! -- But we shall have to develop mechanisms to counteract the visual practice of using teaching as an avenue of social mobility and using the schools to persuade concerning one set of values only.

20. The traditional boundaries between discipline methodology will disappear, i.e. general methods related to the cognitive disciplines will displace specialized methods in specific subjects.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
4 10%	14 36%	6 15%	1 3%	13 33%	1* 3%

*Respondent seems by comments to have meant "Never".

Not "replace" but "complement" and "be integrated with". I see a place for both. -- Only to the degree that convenience and common sense make this possible. -- "Disappear" is too strong a word. -- Trend is toward specialization. -- While cognitive skills are common to various disciplines, many still believe that each discipline possesses an idiosyncratic structure. -- Do not believe that this will be the direction of change. -- Some evidence already that transfer is specific. I doubt that general methods will supersede the growing trend toward methodology related to areas of specialization. -- Yes, but this may well be followed by increasing attention to the application of general principles to specific subjects. -- Not likely in our faculty because the staff is largely composed of subject matter specialists.

25. There will be a disillusionment with innovation and change in teacher education.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
9 23%	10 26%	4 10%	2 5%	13 33%	1 3%

Too often innovations are made without sufficient thought and preparation. Such innovations bring about disillusionment. -- There is always disillusionment, but this does not stop inevitable change and innovation. One could therefore score "2000" or "Never:. -- There will always be some support for retaining older models. -- Some are now disillusioned; others will become so; but the great majority of those involved in education will continue to advocate innovation. -- There are always people who are disillusioned; they are afraid of change. -- Current recession has intensified public consciousness re costs. -- Anyone who is satisfied is not doing his job. Criticism strengthens programming unless we had no program in the beginning. -- I look for a reaction to the present "existential" approaches in educational writing and thinking, and that will have implications for teacher education. -- Just because there always are swings of the pendulum in the course of human events.

6. Teacher education will be just about the same as it was in 1969-70.

1971-75	1975-85	1985-2000	After 2000	Never	No Response
18* 45%	1 3%		1 3%	18* 45%	2 5%

*One respondent for different reasons placed a response in both boxes

Double answer implies gradual but lasting change. -- Within reason. Change, though inevitable, is gradual. -- We are just beginning to learn about teaching; own institution will never be the same from one period to another. -- Cannot interpret the meaning of "just about the same". -- We are changing. -- The new alternatives are potentially more effective. -- Change will occur with integration with the university. -- Major changes have already been instituted. -- To some extent now. Signs that there will be drastic changes in the 1970's. -- There is continuous change and always will be. -- Based on general rate of change in large organizations.